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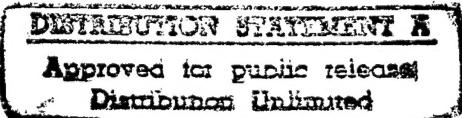


**U.S. Army  
Environmental  
Center**

# **Guidelines to Prepare Integrated Natural Resources Management Plans for Army Installations and Activities**

**April 1997**

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**U.S. Army Environmental Center  
Aberdeen Proving Ground, Maryland 21010-5401**

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Integrated Natural Resources Management Plans  
for  
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**April 1997**

**Prepared by**

**U.S. Army Environmental Center  
Aberdeen Proving Ground, Maryland 21010**

**With support from**

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# PREPARATION GUIDELINES FOR INTEGRATED NATURAL RESOURCES MANAGEMENT PLANS

## INTRODUCTION

The purpose of these guidelines is to provide natural resources managers at Army installations with guidance on preparing integrated natural resources management plans (INRMPs) that are consistent with federal laws, Army policy, and natural resources management philosophies.

The INRMP is the installation commander's adaptive plan for managing natural resources to support and be consistent with the military mission while protecting and enhancing those resources for multiple use, sustainable yield, and biological integrity. The purpose of the INRMP is to ensure that natural resource conservation measures and Army activities on mission land are integrated and are consistent with federal stewardship requirements. INRMPs should be written to reflect the scope of the Army's stewardship requirements to sustain native ecological resources on a landscape and watershed scale and to comply with current legal mandates.

These guidelines are intended to support the Army policy of preparing and implementing INRMPs as directed by Army Memorandum (21 March 1997), *Army Goals and Implementing Guidance for Natural Resources Planning Level Surveys (PLS) and Integrated Natural Resources Management Plan (INRMP)*, and to assure that Army stewardship requirements are being addressed and executed on Army installations.

These guidelines consist of four parts. Part I includes a discussion of the compliance requirements, goals, stewardship, National Environmental Policy Act (NEPA) requirements, INRMP preparation process, INRMP preparation principles, and INRMP standardization. Part II contains an annotated outline for each of the major chapters of the INRMP. Part III is a checklist of possible elements that could be included in the INRMP or documents that could be consulted or referenced. Part IV is a list of laws that evoke certain conservation actions.

# PART I - PREPARATION GUIDANCE

## 1.0 OBJECTIVE

The objective of this document is to provide guidelines for the preparation of integrated natural resources management plans (INRMP) for U.S. Army installations and other lands used for the Army military mission, including those lands used by the State Army National Guards and U.S. Army Reserves. The management of natural resources is a series of processes over a long period and the INRMP provides incremental steps to achieve those long-term goals.

## 2.0 COMPLIANCE REQUIREMENTS

### 2.1 Federal Laws and Executive Orders

The preparation of an INRMP will normally encompass compliance with certain laws or executive orders. The following list, although not inclusive, includes most of the legal requirements that an installations would be concerned with. A more comprehensive list is found in Part IV of these guidelines:

- Sikes Act of 1962 ( as amended through 1988)
- National Environmental Policy Act of 1969
- Endangered Species Act of 1973
- National Historic Preservation Act of 1966 (as amended through 1992)
- Archeological Resources Protection Act of 1979
- American Indian Religious Freedom Act of 1978
- Native American Graves Protection and Repatriation Act of 1990
- Federal Noxious Weed Act of 1974
- Clean Water Act of 1987
- Clean Air Act (as amended through 1990)
- Federal Insecticide, Fungicide, and Rodenticide Act
- Protection of Wetlands, 1977, Executive Order 11990
- Migratory Bird Treaty Act

### 2.2 Regulatory Requirements

In order for an INRMP to be valid, it must not only comply with applicable natural resource laws, but with Department of Defense Directives and Instructions, and Army Policies, as well.

Department of Defense Instruction 4715.3, *Environmental Conservation Program*, and Army Regulation 200-3, *Natural Resources - Land, Forest and Wildlife Management* both require military installations to prepare INRMPs. Army Memorandum ( 21 March 1997), *Army Goals and Implementing Guidance for Natural Resources Planning Level Surveys (PLS) and Integrated Natural Resources Management Plan (INRMP)* requires that all CONUS and certain OCONUS installations having more than 500 acres of mission lands shall have and execute a valid INRMP. Via official memorandum, the MACOM may request that a particular installation be exempted from these requirements. Adequate supporting evidence and reason must be provided with this

request. This request will be made to HQDA (DAIM-ED-N), which will appropriately concur or non-concur with the request and respond via memorandum to the MACOM.

### **3.0 GOALS OF INTEGRATED NATURAL RESOURCES PLANNING**

- Support the installations operational mission
- Meet stewardship requirements
- Enhance quality of life

### **4.0 STEWARDSHIP THROUGH ECOSYSTEM MANAGEMENT**

Stewardship of natural resources on an ecosystem scale addresses requirements of water quality, soil productivity, biological diversity of native flora and fauna, and compliance concerns. The INRMP must emphasize protection and management of soil and water resources, which will, in turn, support the sustainability of biological resources and of mission activities.

As a minimum, the scope of INRMP implementation should span the entire installation, but the consideration of the effects of that management should extend beyond installation boundaries. For example, downstream water quality must be considered when planning on-post activities.

Ecosystem management provides a means for the Army to both protect biodiversity and to provide high quality military readiness. The INRMP is a mechanism through which Army installations can maintain sustainable land use through ecosystem management.

Ecosystem management must be based on clearly stated goals and objectives, and the INRMP must identify those goals and objectives, means to accomplish them, and methodologies to monitor results against objectives. An INRMP is the mechanism through which both ecosystem management and biodiversity protection will be accomplished on Army installations in the context of accomplishment of the installation's operational mission.

### **5.0 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)**

Informed decision-making using the NEPA process must be an integral part of natural resources management on installations. By following the NEPA process, damages to natural resources on Army lands can be minimized or mitigated.

The adoption of a formal INRMP may be considered a major federal action as defined by Section 1508.18 in the Council for Environmental Quality's (CEQ) regulations. Planning documentation should satisfy NEPA requirements. Installations are encouraged to subject draft INRMPs to the scoping process defined within NEPA and AR 200-2. At a minimum, environmental analysis and solicitation of public comments will be completed in accordance with AR 200-2 prior to implementation of an INRMP. The INRMP must be finalized only after considering the alternatives, some of which may have been identified during a public participation process.

## **5.1 Management Alternatives**

To assure that the best management strategies are selected for managing the natural resources, several possible management scenarios may need to be considered for each resource area. These alternatives could include different intensities of management, alternative best management practices to accomplish the goal, or even land use changes to accomplish the resource objectives. The NEPA process will allow full consideration of viable alternatives and will assure that critical issues are not overlooked during the decision making process.

## **5.2 Administrative Record**

Maintaining an administrative record of INRMP preparation actions is an essential step required by NEPA. Public participation, coordination and consultation with other agencies, documents consulted, alternatives considered, and decisions made must all be a part of the administrative record. The level of public involvement and the amount of documentation required must be determined by the installation. If it is determined during the environmental review that the impacts of management decisions should be documented in an environmental assessment (EA), the record must document the decision making process that was used in selecting the preferred alternative. The EA should address proposed management actions together with the impacts of those actions on natural resources. Where specific proposed management actions cannot be described, the EA must establish some significance criteria that will guide future prescribed activities. With good NEPA documentation to support natural resources management decisions, the INRMP should serve as an excellent reference for tiering future NEPA documents.

# **6.0 INRMP PREPARATION PROCESS**

The INRMP development process may not be exactly the same at all installations, but the guidance offered here could be considered a reasonable approach to assure that important issues are addressed. The chart in Figure 6-1 provides a suggested schedule for the development of the INRMP and associated NEPA documents. The flow chart in Figure 6-2 describes pictorially how the process should work.

## **6.1 Funding**

The INRMP development, including associated NEPA documentation, should not exceed one year. However, it is important to program funding at least two years in advance. Revisions or updates must be anticipated and programmed into the Environmental Program Requirements (EPR) report no later than Year-4 of the life of the existing plan. Since the EPR report process encourages long term budget planning, it is easy to budget for INRMPs and accompanying NEPA documents at least five years out.

## **6.2 Decision Making**

It is important that the INRMP preparation process be directly linked with the NEPA documentation. This does not mean that the general public or a environmental organization will dictate the contents of the INRMP. Once the military mission and natural resources objectives have been well identified, outside participation could be very helpful in identifying different alternatives to reach those objectives. The selection of the final preferred alternative is a decision

to be made by the Installation Commander and comes at the discretion of the Installation Commander. Appropriate documentation of these efforts becomes the NEPA documentation. An INRMP that is developed following the NEPA process will result in a well informed management program that is realistic and defensible, and will provide the greatest level of assurance of the sustainability of the future military mission. However, since this NEPA process usually requires a higher level of effort, additional costs must be included in the budget.

### **6.3 Installation Responsibility**

It is imperative that installation staff take full responsibility for the INRMP preparation and implementation processes wherever possible. Using external sources to develop the INRMP is discouraged except where the necessary level of expertise does not exist at the installation. If some aspects of INRMP development should be accomplished using outside resources, entities responsible for implementation should maintain a sufficient level of quality control to assure that the plan appropriately address issues and that it is implementable.

**Figure 6-1**

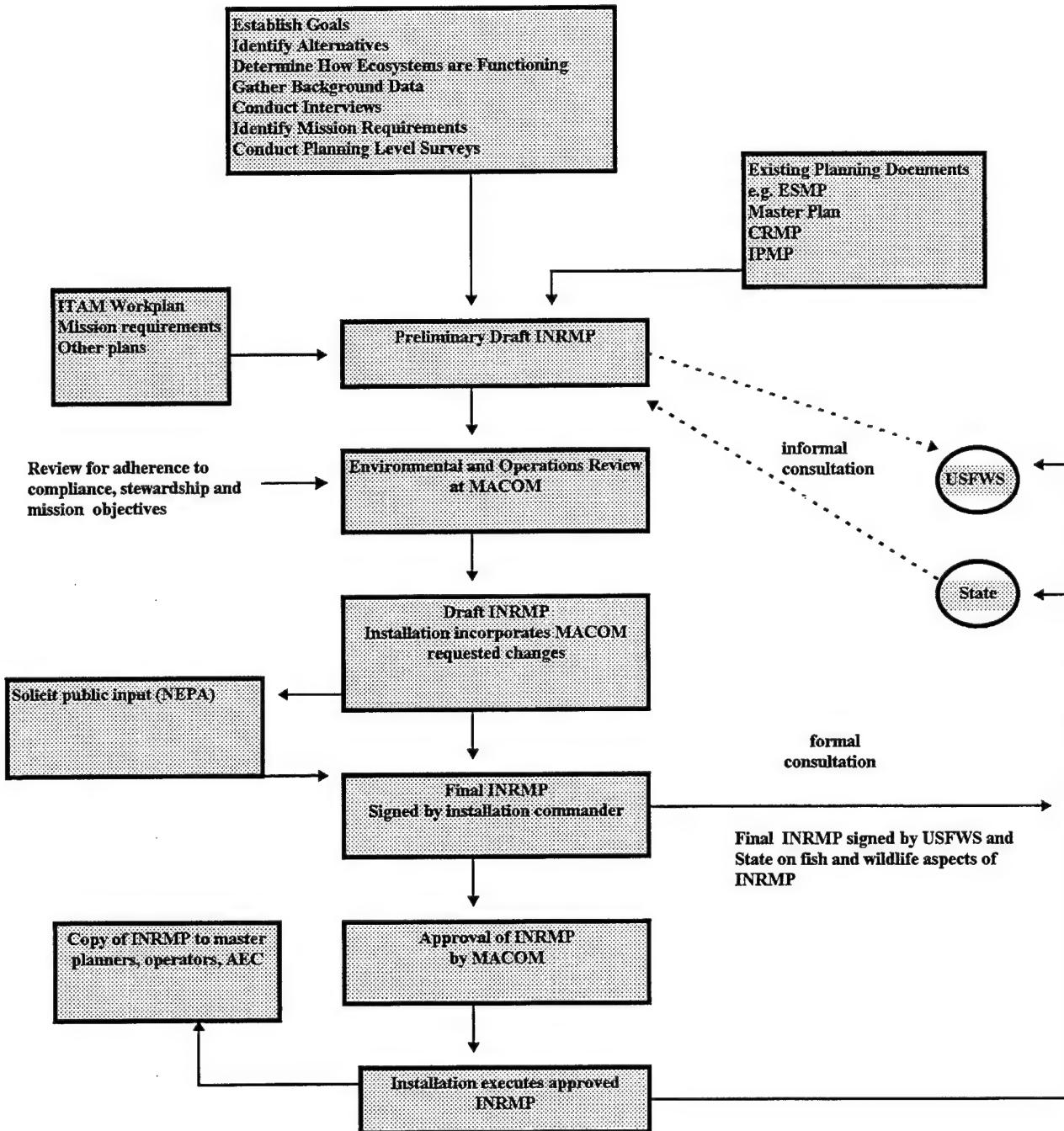
<b>Suggested INRMP Development Schedule</b>	
<b>ACTION</b>	<b>DAY</b>
Start (Notice to Proceed)	0
Draft Project Management Plan	10
Final Project Management Plan	30
Draft INRMP & Draft DOPAA	90
Draft EA & Final DOPAA	150
Draft Final INRMP	240
Final EA & Draft FNSI	290
Army Signs FNSI	300
30-Day Notice of Availability	300
Army Approves Final INRMP	360

**EA - Environmental Assessment**  
**DOPAA - Description of Proposed Actions and Alternatives**  
**FNSI - Finding of No Significant Impact**

**NOTE:** This schedule assumes that an Environmental Impact Statement(EIS) will not be required. If an EIS is required, this schedule will need to be modified and extended accordingly.

## INRMP Preparation Process

### Figure 6-2



#### **6.4 Installation Interviews**

The INRMP preparation process typically starts with interviewing installation personnel within the following offices or directorates:

- Environmental Directorate or equivalent - Fish and wildlife management; forest management; threatened and endangered species management; agricultural and grazing outlease management; pest management; water quality monitoring; cultural resources management; environmental awareness; land management; other.
- Provost Marshal's Office - Natural resources law enforcement; land management security requirements.
- Outdoor Recreation - Natural resources related outdoor recreation activities; check in/check out procedures; hunter safety requirements; harvest data; number and location of hunting areas; other.
- Directorate of Engineering and Housing - Master Planning; future development plans; total installation size; acreage of training areas, impact areas, cantonment areas.
- Directorate of Plans, Training, and Mobilization or mission operations equivalent - Range and Training Land Program (RTLP); type of missions; troop and civilian strength; mission activity schedules; number and type of vehicles and equipment; number, use, and location of ranges, training areas, and impact areas; improvements in natural resources that would benefit or support the military mission, etc.
- Fire Department - Prescribed burn schedules, firebreak maintenance, wildfire response, etc.
- Public Affairs Office - Background information on installation history and military mission.
- Directorate of Safety or equivalent - Land management for ammunition quantity distances; noise buffer requirements.

#### **6.5 Planning Level Surveys**

Planning level surveys are those surveys that could make significant contribution to the understanding and management of existing resources. Existing information from surveys of installation resources must be utilized to the extent that they contribute to the preparation of the INRMP. If adequate surveys are missing or incomplete, those deficiencies must be identified within the content of the INRMP and their completion should be scheduled in the INRMP.

As a minimum, the following planning level surveys, and associated maps, should be included:

- Topography
- Wetlands
- Surface waters
- Soils
- Flora
- Vegetative communities
- Threatened and endangered species
- Fauna

Other surveys could include:

- Migratory bird surveys
- Geologic surveys
- Sensitive area surveys
- Cultural resources surveys
- Erosion surveys
- Others important to the installation

## 6.6 Other Background Materials

During the interviews, other relevant background materials should also be collected or reviewed. These background materials include the following documents:

- Relevant Environmental Assessments/Impact Statements
- Biological opinions
- Previous Natural Resources Management Plan
- Integrated Cultural Resources Management Plan
- Historic Preservation Plan
- Forest Management Plan
- Endangered Species Management Plans
- Agricultural/Grazing Leases and Plans
- Watershed Management Plans/Studies
- Wetlands Management Plan
- Integrated Pest Management Plan
- Installation Master Plan
- Installation Property Utilization Plan
- Installation Training Regulations
- Implementation Plan of the RTLP
- Installation Environmental and Noise Regulations
- Hunting Regulations
- Cooperative Fish and Wildlife Management Plan
- Erosion Management Plan

## 6.7 Resources Reconnaissance

Following the interviews and the collection of background materials, an installation reconnaissance is conducted to document the following features:

- Special interest areas
- Critical habitat
- General habitat
- Wetlands
- Streams and open water areas
- Commercial and urban forestry resources
- Riparian areas
- Firebreaks

- Agricultural and/or grazing areas
- Hunting and fishing areas
- Training and impact areas
- Firing ranges
- Other mission areas

Natural resources opportunities such as watchable wildlife areas, outdoor recreation opportunities, and public access potential should also be noted. In addition, grounds maintenance, forest management, and agricultural/grazing lease management practices should be documented.

The findings of the interviews and installation reconnaissance, as well as information obtained from the background research are synthesized and incorporated into the INRMP. The INRMP should describe the existing environment, the military mission, training activities, current research/surveys that are being conducted, current installation programs relating to natural resources management, data gaps and future studies necessary to fill those data gaps, consistencies and inconsistencies between the INRMP and other installation plans, measures to overcome any inconsistencies, land use restrictions, suggested management practices, priorities of proposed projects, responsibilities, and resource requirements, including staffing, equipment, and training. A checklist of potential components of an INRMP or information sources can be found in Part III of these guidelines.

#### **6.8 Coordination and Review**

The installation is encouraged to work with other organizations, agencies, and individuals both off and on the installation throughout the process of preparing the INRMP. Building partnerships is essential for ecosystem management to function. Informal reviews are encouraged, and formal reviews should be done as needed. These reviews should be consistent with the NEPA process.

It is especially critical that INRMP preparation be coordinated with those individuals responsible for the military mission. Military land planners and users should be part of the preparation team and not just reviewers of drafts. Their involvement should begin early in the planning process and continue throughout the execution phases. It is important that the INRMP be beneficial to the military mission.

Coordination and consultation with the State Historic Preservation Officer, the appropriate State agency, and the U.S. Fish and Wildlife Service (USFWS) is specifically required during preparation of the INRMP. Since these latter two agencies will be signatory to the fish and wildlife aspects of the INRMP, it is important to get their "buy-in" early in the process. They are also essential for determining the needs of local ecosystems balanced against the requirements of the installation's military mission.

Meeting with installation neighbors (e.g., National Park Service, U.S. Forest Service, and Native American Tribes) is also necessary in order to determine how installation activities may affect their lands, as well as to discuss management opportunities for shared ecosystems.

Neighboring communities could also contribute to the success of the planning effort. Once the mission and natural resource objectives have been drafted, concerned citizens and groups should be given opportunity to express their interests. This can be done through public notices or meetings, as necessary, during the NEPA process. One-on-one contact with groups with strong interests in installation natural resources is the best way to get productive input. The tactic of waiting until the installation has the plan completely coordinated prior to informal outside review is specifically not recommended.

Some agencies and outside individuals or groups may appropriately review the entire document, while others may only need (or desire) to review portions of the INRMP. These decisions should be made by the installation.

## **6.9 Approval Process**

MACOMs must review the final draft before it is made available for public comment. After changes (if any) that are recommended by the MACOM have been reconciled, and the supporting NEPA documentation supports a finding of no significant impact (FNSI), the Installation Commander signs the FNSI. A Notice of Availability is then published and the INRMP, Environmental Assessment, and FNSI are made available for a thirty-day public comment period.

The Installation Commander then signs the INRMP and it is submitted to the appropriate State agency and the USFWS for concurrence on the fish and wildlife aspects of the INRMP. The concurrence of these agencies can be in the form of affixing signatures of appropriate officials on the "signature" page near the front of the document, or in the form of a signed letter of concurrence from the agency. Any substantive changes requested at this stage must be discussed with the MACOM prior to the agreement with such proposed changes. The signed INRMP is then provided to the MACOM for final approval. Unless MACOMs or HQDA specifically request an extension, approval is automatic after 60 days of receipt by the MACOM.

## **7.0 INRMP PREPARATION PRINCIPLES**

The INRMP must be implementable and should conform to the principles discussed below.

- Purpose.** The INRMP must meet legal mandates as well as Department of Army policies pertaining to INRMPs. The most important role of the INRMP is to serve as an effective installation tool for managing natural resources consistent with mission requirements. The INRMP could be viewed as a "snapshot" of the current situation with a management implementation strategy for at least the next five years.
- Uniformity.** The INRMPs should maintain enough structural similarity so that reassigned natural resources managers and staff can be familiar with the components and organization of the documents.

- **Coordination.** The process of preparing the INRMP must include coordination with relevant agencies, organizations, and public interest groups, as well as appropriate coordination within installation and Army chains of command. The INRMP should address relationships between other existing environmental programs on the installation, and the appropriate portions of those plans should be incorporated by reference.
- **Automated Data Processing (ADP).** In addition to a hard copy of the INRMP with associated maps and support data, installations are encouraged to build their INRMP within ADP (including Geographic Information Systems) systems if they are organized and equipped to do so.
- **Applicability.** An INRMP is required for all Army lands having significant natural resources management opportunities as identified in current regulation. Included are those lands withdrawn from other federal agencies for military use by Congressional action or otherwise under the long term use of the Army. It also includes lands used by the Army National Guard and Army Reserve components. Some lands, such as impact areas, may not have the level of natural resources management potential as more accessible lands, but these lands should be addressed to whatever level of management is possible.
- **Ecosystem Management.** The INRMP should use an ecosystem management approach to natural resources management. The concept of single species management is no longer an appropriate approach to managing natural resources on Army lands. Each element of the ecosystem must be managed in perspective of its relationship to other parts of the ecosystem so that natural biological integrity is maintained to the extent feasible.
- **Data Collection.** The INRMP can be prepared at any stage of development of the installation's natural resources program. The INRMP should include summaries of data collected, but delaying the preparation of the INRMP to collect more data is usually not recommended.

Data collection systems should be a part of the INRMP, building upon existing data. The INRMP will become more accurate and more valuable as databases are developed. The INRMP should also identify data deficiencies and provide a remedy for such deficiencies through plan implementation.

- **Detail of Plan.** The INRMP should be in enough detail, including referenced material, to provide managers with information necessary to implement all phases of the natural resources management program, even if the manager is new to the installation.
- **Military Mission.** The needs and effects of the installation's military mission in terms of natural resources is a critical component of the INRMP. The INRMP must support military use requirements as well as natural resources needs to ensure the mission can be sustained. To the extent possible, mission activities should be described in enough detail to predict specific impacts on natural resources, as well as to describe appropriate management and remediation measures to be included in the INRMP. Information on the types of military mission activities, troop and

civilian strengths, numbers and types of vehicles and equipment that may impact natural resources, and range use should be presented. Information on the natural resources necessary to support the military mission should also be discussed, as well as the impacts that natural resources management may have on the military mission (e.g., certain areas may require special precaution due to the presence of endangered species). At installations where the Integrated Training Area Management (ITAM) program has been implemented, that program must be an integral part of the INRMP to assure direct support to the military mission. However, the INRMP is not a military mission operations document. The action proposed within an INRMP is the management of natural resources, not the fielding of the military mission. Where one exists, the Range and Training Land Program (RTLP) Range Development Plan (RDP) will be used as the source document for identifying the military mission.

- **Compatibility.** Natural resource programs described within the INRMP must be fully compatible with one another. Incompatibilities with other installation programs must be identified, and strategies must be presented to resolve these incompatibilities. This will assure complete integration with the installations master plan, the facilities maintenance plan, integrated pest management plan, cultural resources management plan, endangered species management plan, training and range area management plan, mobilization and deployment plans, and information management systems.
- **Enforcement.** Enforcement of natural resources laws must be included within INRMPs. The emphasis should be toward professional enforcement of these laws.
- **Issues.** Biopolitical issues affecting implementation of INRMP should be identified, and strategies should be outlined for their resolution. Parties involved in these issues may be either internal or external to the installation.
- **Priorities.** Priorities for individual programs within INRMP must be identified.
- **Implementation.** INRMPs must include an implementation strategy that addresses, at a minimum, funding and manpower. Implementation should also identify programs and projects within INRMPs that are required by law and those that are not. The INRMP should identify as many specific projects as possible, as opposed to generic discussions of programs. Implementation should be specific for the intended life span of the INRMP with the understanding that projects may change through adaptive management and may be affected by funding availability.
- **NEPA.** The NEPA process will be used to make informed decisions with regard to management and protection of installation natural resources. Information obtained during the environmental review process and other sources will be integrated into these plans as appropriate.
- **Public Access.** INRMPs must discuss public access policies, including access for hunting and fishing and other types of outdoor recreation, access for Native Americans to religious sacred sites, and access provisions for handicapped individuals.

## **8.0 INRMP STANDARDIZATION**

INRMPs are organized by standardized chapters to allow users to quickly find items of interest. However, these chapters should not be written as stand-alone entities but should link and interrelate with one another to appropriately address overlapping ecosystem concerns.

### **8.1 Main Chapters**

Main chapters will be numbered consecutively (1, 2, 3 etc.) and use the standard chapter headings within these Guidelines. Installations may not need each chapter heading, but the chapter should be included with a brief statement as to the reason for no content. Installations may determine a need to add a chapter, but additions should be kept to a minimum for consistency. Any additional chapter should be inserted at the most appropriate location. Chapters may have as many unnumbered paragraphs as needed to describe the programs and projects.

### **8.2 First Echelon Subchapters**

First echelon subchapters will be numbered using a period followed by consecutive numbering (1.2, 3.4, etc.). Standard subchapter headings are provided in the Guidelines, but these may be modified if needed. These subchapters may have as many unnumbered paragraphs as needed for descriptions.

### **8.3 Additional Subchapters**

Additional subchapter breakdowns will be identified using standard format (e.g. 3.2.1) with no restrictions on the number or nature of such further divisions of chapter content. Each subchapter will have a heading to be included in the Table of Contents. Subchapters may have as many unnumbered paragraphs as needed.

### **8.4 Page Numbering**

Pages will be consecutively numbered starting with the first page following the Table of Contents. Decimals will not be used unless changes are made which require additional pages.

### **8.5 References and Appendices**

In general, appendices will be used for short, but important, documents and items that are often needed for reference. References should be used for long documents or items seldom needed beyond the descriptions within the INRMP. For example, it might be appropriate to put descriptions of soil types found on an installation in an appendix while the document from which these descriptions were taken would be referenced. An important memorandum might be in an appendix, while an Army policy would be referenced. Local regulations might be included in an appendix, while an AR would more appropriately be referenced.

### **8.6 Glossary and Index**

Neither a glossary nor an index is included within the Guidelines. A glossary may be included if installations believe it useful for persons who will use the INRMP. An index may be included if installations believe it important to locate specific words or terms. It is suggested that this decision be made based on the completeness and detail within the Table of Contents and the

clarity of chapter headings to determine chapter contents. Neither of these items should be included unless it is felt that they would be used by persons responsible for implementing the INRMP.

### **8.7 Number of Copies**

A minimum of three copies will be sent to the appropriate MACOM with one of these to be forwarded to the U.S. Army Environmental Center. It is assumed that cosigners (normally the USFWS and the appropriate State agency) will each want at least one copy. Thus, the installation should assume that it will need a minimum of five copies beyond its internal use. The total number of copies will largely be determined by the number of ecosystem partners both off and on the installation. When possible and practicable, a digital copy of the INRMP should also be made available.

## PART II - MAJOR CHAPTER OUTLINE

### **COVER PAGE**

The Cover Page should include, as a minimum, the name of the document (Integrated Natural Resources Management Plan), the name of the installation, and the effective dates (a five year period).

### **SIGNATURE PAGE**

This page will include those who approve the INRMP by signature. Normally this will be the installation commander, and the MACOM representative. The director of the appropriate State agency, and the regional director of the USFWS will approve the fish and wildlife aspects of the INRMP. In lieu of signatures from the state agency and the USFWS, concurrence letters from those agencies may be inserted immediately following the signature page.

### **PREPARER - REVIEWER PAGE**

This page identifies those who prepared the INRMP and those who reviewed it. Reviewers should include installation and major command personnel. If the installation believes that agencies external to the installation were instrumental to review (and approval) of the entire plan, they may also be included. Those who only provided incidental technical advice or preparation assistance should be identified in the "Persons Contacted" chapter and not on the 'Preparer-Reviewer Page.'

### **PREFACE (Optional)**

This would normally be a brief statement regarding the importance of natural resources management to the installation.

### **TABLE OF CONTENTS**

Depending on the desires of the installation, the table of contents (TC) may be extremely detailed to second and third level subchapters, or it may be abbreviated to major chapters and subchapters. If the second option is chosen, it is recommended that a detailed TC be included at the beginning of each major chapter.

### **EXECUTIVE SUMMARY**

The Executive Summary should include those items that executive personnel (installation, MACOM, and outside agencies/organizations) need to know in order to appreciate the importance of the document. This section should rarely exceed three pages in length.

**Purpose.** Include the statement from the Army Memorandum (21 March 1997), *Army Goals and Implementing Guidance for Natural Resources Planning Level Surveys (PLS) and Integrated Natural Resources Management Plan (INRMP)*, that the purpose of the INRMP is to ensure that natural resource conservation measures and Army activities on mission land are integrated and are consistent with federal stewardship requirements.

**Environmental Compliance.** Briefly describe the major legal requirements pertinent for natural resources management. The list of laws and Executive Orders in Part I, Chapter 2.0, although not all inclusive, may be used as a guide.

**Scope.** Describe the geographic and programmatic scope of the Plan. Briefly identify ecosystems toward which the Plan will be targeted.

**Relationship to the Military Mission.** Describe how the Plan will affect the military mission. This should be a very positive statement and should briefly identify:

- what the military activities are
- what natural resources are required to support mission activities
- how mission activities impact natural resources, either directly or indirectly
- the impacts of natural resources, or their management, on the mission

**Partnerships.** Indicate those who will be significant partners with the installation in implementing the Plan.

**Planned Major Initiatives.** Indicate, in priority order, the major programs which the Plan identifies as critical during the next five years.

**Costs and Benefits.** Identify costs in terms of total funds, personnel, installation support, and command support. Identify benefits in terms of the goals identified in Chapter 1-1.

**Summary.** Provide a concise summary of the effects of the Plan on the installation and its mission.

## 1.0 GOALS AND POLICIES

This chapter should have an introductory statement regarding the Army's commitment to natural resources management.

### 1.1 Goals

List general goals of the Plan. These should be specific to the needs of the installation, but should also be a reflection of the objectives addressed in the Army Environmental Strategic Action Plan. These objectives include the sustainability of lands for mission use, protection of natural resource assets, protection of cultural resource assets, provision of recreational opportunities, and multiple use accommodation.

## **1.2 Policies**

These should be policies established by the installation that will be used to attain each goal identified in Section 1.1. These policies can also serve as a broad checklist to monitor the success of the plan.

## **1.3 Monitoring Progress**

Include an annual monitoring procedure to determine the effectiveness of the INRMP.

# **2.0 LOCATION AND ACREAGE**

## **2.1 Location**

Describe the location of the installation in relation to the part of the state and the proximity to such things as major cities, rivers, and landmarks.

## **2.2 Acreage and Acquisition**

Describe land acquisition, including property ownership, water rights, and the size of parcels obtained to create an historic progression of the total installation size. Note previous land uses. Acquisition information (e.g., how much land, from whom, when) is important to determine the overall effects of Army actions on the land and its natural resources over time.

## **2.3 Installation History**

Briefly describe the history of the installation in terms of mission and major historic events.

## **2.4 Neighbors**

Identify those who border the installation or are regionally significant. Installation activities which may affect these neighbors' lands should be indicated.

## **2.5 Satellite Installations**

Identify other installations or lands directly affected by the INRMP.

# **3.0 MILITARY MISSION**

## **3.1 Overview**

Provide an overview of the military mission, including the types of training, troop data and civilian strengths, numbers and types of equipment which might impact natural resources, range use days, and weapon and munitions production or storage..

## **3.2 Natural Resources Needed to Support the Military Mission**

Describe the natural resources that are necessary to support the military mission. (e.g. vegetation for concealment islands, open areas for testing, and stable soil for maneuvers). At RTLP-participating installations, use the information available as a product of the RTLP planning process described in AR 210-21.

### **3.3 Effects of the Military Mission on Natural Resources**

Describe the nature of the impacts or potential impacts of the current military mission on soil, vegetation, water, and wildlife.

### **3.4 Effects of Natural Resources or Their Management on the Mission**

Discuss the various laws, policies, and regulations regarding protection of various environment elements that affect the mission. Examples of these laws include wetland protection, cultural resources protection, and endangered species protection. In addition, describe natural resources conditions that currently affect the accomplishment of the military mission, or that could potentially impact the mission if they were not adequately addressed (e.g., steep slopes, wet soils, and severe soil erosion).

### **3.5 Future Military Mission Impacts on Natural Resources**

Project changes in the military mission over the next five to ten years and describe the predicted effects of these changes on natural resources. Coordinate with the RTLP process where applicable.

## **4.0 FACILITIES**

### **4.1 Overview**

Describe the overall nature of the installation. Is it a small city, an industrial complex, or a relatively small community? What is the size of the cantonment area? Mention facilities such as airfields and training ranges. This chapter need not be lengthy. Additional discussion could be included in the accompanying NEPA document.

### **4.2 Transportation System**

Describe the road, railroad, air, and waterway system for transportation on the installation. Include roads, trails, and airfields on the range which will be important to the implementation of, or affected by, the INRMP.

### **4.3 Water Supply**

Describe the installation's water quantity needs to support domestic use, irrigation, or wildlife watering. Describe water quality as it affects domestic use, wildlife, or aquatic species. Describe the sources of water for the various uses, and the effects of water withdrawal on aquifers, streams, or other natural resources.

### **4.4 Projected Changes in Facilities**

Describe projected changes of facilities or additional facilities that are planned for construction during the next five to ten years. Indicate any significant impacts or implications these projected changes or additions could have on management of natural resources or on the implementation of the INRMP. The installation's Real Property Master Plan should be consulted to retrieve this information.

## **5.0 RESPONSIBLE AND INTERESTED PARTIES**

### **5.1 Installation Organizations**

Note that the installation, as a whole, is responsible for implementation of the INRMP. Identify those positions and organizations on the installation important to the success of the INRMP along with their role in implementing the plan. This normally starts with the installation commander.

### **5.2 Other Defense Organizations**

Identify other Defense organizations that will assist with the implementation of the INRMP. These organizations normally include the MACOM, and they may include such organizations as the Army Environmental Center, Corps of Engineers laboratories, Corps of Engineers Districts, or even non-Army agencies within Defense.

### **5.3 Other Federal Agencies**

Identify other federal agencies that contribute to implementation of the INRMP. This will include the USFWS as a signatory partner. It may also include such agencies as the Natural Resources Conservation Service, the U.S. Forest Service, the National Park Service, the Bureau of Land Management, and others.

### **5.4 State Agencies**

Identify state agencies that will have a role in implementing the INRMP. This will include the appropriate State natural resources agency as a signatory partner. It could also include the state soil and water conservation agency.

### **5.5 Universities**

Identify universities involved in the implementation of the INRMP.

### **5.6 Contractors**

Identify the role of contractors in the implementation of the INRMP. If any are already selected or are working on contracts, they may be identified by name.

### **5.7 Other Interested Parties**

Identify conservation groups, clubs, or individuals interested in the development and implementation of the INRMP. This can include national groups such as The Nature Conservancy, Ducks Unlimited, and the Sierra Club. It, more likely, will include state or local groups such as the state affiliate of the National Wildlife Federation or the local rod and gun club. It should include neighboring landowners who have a role in the plan.

### **5.8 Signatory Agencies**

The specific responsibilities of the signatory agencies (generally the USFWS, the appropriate State natural resources agency, and the installation) should be delineated. These responsibilities should include such items as access, funding transfers, services provided, research, enforcement, means to update the INRMP, and other items of mutual interest. If a formal agreement exists

between parties, this information may be included as an appendices to the plan as a convenient way to specifically identify the special relationships among the three signatory agencies.

## **6.0 NATURAL RESOURCES AND CLIMATE**

This chapter describes the natural resources of the installation as well as the condition and trend of each resource. Existing or needed planning level survey can also be identified for each resource. This chapter will not address the planned management of resources. If desired, this chapter may be abbreviated in the INRMP and discussed more extensively in the supporting NEPA document.

### **6.1 Setting**

Describe the major ecoregion(s) together with component ecosystems, and land uses bordering the installation.

### **6.2 Topography**

Describe the general topographic features of the land, including elevation changes, steepness of slope, watersheds, and any others that may be important to managing natural resources.

### **6.3 Geology**

Describe the geologic makeup of the installation. Items which might be included include structure, stratigraphy, and seismicity.

### **6.4 Climate**

Describe the general weather patterns. Provide information on temperature, precipitation, and wind as well as other variables which might be locally important.

### **6.5 Petroleum and Minerals**

Identify mineral and petroleum resources on the installation and whether or not they have commercial value. Especially note any characteristics of these resources, such as strip mined areas, that could influence the management of natural resources on the installation.

### **6.6 Soils**

Generally describe installation soils and their properties, including erodibility characteristics. Identify prime farmland soils. Detailed characteristics, capabilities, and limitations can be included in an Appendix or referenced. Reference any published soil surveys that may exist. Summarize the status of soil productivity and identify trends in that productivity in recent years. Emphasize the effects of wind and water erosion.

### **6.7 Water Resources**

Describe both surface and ground water resources. Include lakes, ponds, perennial and intermittent streams, wetlands, and floodplains. Summarize the status of water quality and identify the trend of that quality in recent years. Pay particular attention to nonpoint source pollution, especially sedimentation and other pollutants most affected by the INRMP.

## **6.8 Flora**

Describe results of inventories of installation flora which could include Land Condition Trend Analysis (LCTA) surveys, floristic collections, forest inventories, endangered plant surveys, or habitat analyses. Summarize species accounts. Use appendices if needed for specific lists. Indicate succession trends. Refer to vegetation (or habitat) map if one is available. Identify wetlands, critical habitat, globally ranked communities, unique and sensitive habitats, and other areas of special concern. Identify ecosystems to be managed.

## **6.9 Fauna**

Describe results of inventories of installation fauna which could include game census, endangered species surveys, LCTA bird or small mammal surveys, neotropical bird surveys, fish census, or other similar studies or surveys. Summarize species accounts. Use appendices if needed for specific lists. Identify livestock and exotic species on the installation.

## **6.10 Threatened and Endangered Species**

Identify Federally listed endangered, threatened, and candidate floral and faunal species. Identify state endangered and special concern species, as well as species off-site which could potentially be affected. Summarize species accounts. Include the status of consultations with the USFWS.

# **7.0 LAND USE AND MANAGEMENT UNITS**

## **7.1 Land Uses**

Describe the various ways installation lands will be used. If non-Army lands within the confines of the installation boundary will be covered by the INRMP, uses of those lands should also be described. Land uses could include vehicle maneuvers, bivouacking, drop zones, munitions production or storage, buffers, impact areas, timber production, hunting and fishing, grazing, agricultural leasing, and cantonment, to name a few. Several land uses may overlap one another. Describe what each land use means in terms of natural resources management impacts or concerns. Describe the amount of acreage involved with each type of land use. Each of these units should be addressed in a separate sub-chapter (7.1.1, 7.1.2, etc.)

## **7.2 Management Units**

Management units are land or water areas that can be physically identified on the ground and on maps or photography, and can be managed apart from other units. Management units could realistically be divided by fencelines, roads, streams, vegetation changes, soil changes, topographic changes, or by differences in mission related activities. The boundary would define where one type of management would end and another would begin. Examples of land management units would include training areas, munitions storage areas, forest management compartments, hunting areas, watersheds, grazing units, agricultural fields, ranges and impact areas, golf courses, and landscaped or other improved grounds. Include any constraints to natural resources management in areas such as training lands, firing ranges, and impact areas. Constraints to natural resources management may include the inaccessibility to areas due to the presence of unexploded ordnance or the occurrence of training. Provide acreage for each individual land

management unit, if available. It might be desirable to address management unit information in table format. It is suggested that management unit be graphically displayed on photography or maps and be stored in the GIS database where they could be rapidly and effectively used in future management decisions.

The last sub-chapter should describe a comprehensive land management unit system (e.g., forest compartments, watersheds, or training areas) to be used to implement an ecosystem approach to natural resources management. Identify the means used to denote each type of land management unit (name, number, alpha character), ensure these identifiers are on any maps used, and use the same identifier when referring to them in the narrative.

## **8.0 NATURAL RESOURCES MANAGEMENT**

### **8.1 Objectives**

Explain that this chapter includes all decisions that will be used to manage the installation's natural resources during the next few years. This chapter is the heart of the INRMP and should be specific and detailed to the extent necessary that program and projects can be effectively implemented. If there are data gaps or unresolved concerns, they should be identified in their appropriate location and remediation action planned. Management programs identified in each subchapter must be appropriately integrated with management programs in other subchapters. If past natural resources management history is important to the implementation of the INRMP, identify and explain in the appropriate subchapter anything of managerial significance.

### **8.2 Forest Management**

Include forest management measures that will be implemented to manage the forest ecosystem, with special emphasis on the protection of biodiversity. Recognize the need for forest planning on forests that are not capable of commercial production. Describe forest and forest management relations to the mission. Include requirements for forest inventories and methods for monitoring/regulating harvests and health to maintain sustainability. For installations with a timber management program, include such aspects as harvest, regeneration, disease prevention, and timber stand improvement in terms of forest sustainability. Include, harvest/planting schedules, species, volumes, and other parts of the management program. Describe the effects of pesticides or prescribed fires on other natural resources.

### **8.3 Agricultural/Grazing Outleases**

Describe the agricultural and grazing outleasing program. The effects of farm management practices associated with these outleases, in terms of the total natural resources program and installation ecosystems, should be described. In addition, implementation of best management practices (e.g., crop rotation, no till agriculture, integrated pest management) should also be discussed. Summarize any conservation plan associated with a particular agricultural outlease.

Describe the installation's grazing management program. If controlled grazing exists on the installation, a grazing management plan must be included or attached. Discuss the type of grazing that occurs (e.g., cattle, sheep), the grazing system employed, the fencing arrangement, the length of the grazing season, the number of animal unit months, emergency drought plans, and special

provisions that are outlined in the grazing lease. Discuss how stocking rates, densities, and seasons are determined, and who is responsible for those determinations. Discuss how the grazing program affects other elements of the ecosystem and the military mission. Discuss prescribed fires or other management practices that may be used to manage rangeland resources.

#### **8.4 Habitat Management**

Describe habitat improvement projects which might include items such as food, nesting, and cover plantings, prescribed fire, nesting boxes, disking, aquatic weed control, fish structures, pond construction, and so forth. Indicate the locations, scope, and schedule of practice implementation to allow managers the opportunity to allocate personnel and resources for implementation. Specifically include measures taken for endangered species and neotropical migrants. Ensure that other habitat management programs do not conflict with habitat management provisions required within endangered species management plans.

#### **8.5 Game Harvest Management**

Describe game population management programs. Include such items as population trends, hunting and fishing regulations, and important considerations for the management of each species or group of species on a sustained use basis with consideration for ecosystem integrity.

#### **8.6 Rare, Threatened, or Endangered Species Management**

If the installation has an Endangered Species Management Plan (ESMP), that plan should either be made a component of the INRMP, or the related natural resources management actions described in the ESMP must be fully integrated into the INRMP. In addition to integration of endangered species management into the content of the INRMP, all or parts of the ESMP can be attached or referenced in the INRMP. Any conflicts identified between the INRMP and the ESMP must be resolved prior to INRMP signature.

#### **8.7 Furbearer Management**

Describe programs to manage furbearer populations.

#### **8.8 Other Nongame Species Management**

Describe population management efforts for nongame species which are not included in the above sections. Programs might include neotropical migrants, amphibians/reptiles, bats, or other species which are emphasized.

#### **8.9 Transplants and Stocks**

Describe projects to reintroduce species to the installation. Describe stocking programs, including both fish and wildlife. Identify the species involved, numbers, sizes, locations, and purposes of stocking and transplanting. Discuss biodiversity aspects of these programs, especially the degree of competition between indigenous and non-indigenous species. The introduction of non-indigenous species must comply with Executive Order 11987.

## **8.10 Wetlands Management**

Describe programs that improve the quality of wetlands or efforts to develop, protect, or enhance wetlands. Include specific areas to be managed, management techniques, and species and habitat types that will benefit from such management. Floodplain and riparian area management should be included in this section.

## **8.11 Water Quality Management**

Describe programs specifically designed to improve the quality of water. Discuss how these programs affect water quality off the installation. Describe the use of Stormwater Pollution Prevention Plans within the natural resources program. Discuss the effects of off-installation activities on installation water quality. Relate to the Water Quality monitoring section in Chapter 9.

## **8.12 Land Rehabilitation and Maintenance**

For both ITAM and non-ITAM participants, describe programs designed to restore and maintain damaged or intensely used lands, including damage by wind and/or water. Include efforts for dust control.

## **8.13 Soil Resources Management**

Describe existing or potential soil erosion concerns and their probable causes. Identify if a soil erosion inventory has been made or should be made. Establish a priority for dealing with soil erosion problems. Be site specific if possible. Discuss proposed treatment measures, including mechanical shaping, vegetating, fertilizing, livestock exclusion or other protection, and re-establishment period. Include recommendations for future uses of the sites. Re-vegetation practices should consist of native species to the extent that those species can adequately address the soil stability objectives.

## **8.14 Cantonment Area Management**

Describe programs to manage cantonment area lands. Include general grounds maintenance, but only to the degree that it is part of natural resources management. Include reduced grounds maintenance programs. Discuss golf course management and its relationship to natural resources and water quality. Specifically discuss implementation of the 26 April 1994 Presidential memorandum on Environmentally and Economically Beneficial Practices on Federal Landscaped Grounds.

## **8.15 Pest Management**

This chapter should incorporate appropriate methodologies and strategies identified in the installation's Integrated Pest Management Plan (IPMP). Portions of the IPMP can be referenced or attached to the INRMP, but relevant pest management issues must also be fully integrated in the discussion within the appropriate subchapters of the INRMP. DoD Instruction 4150.7 (DoD Pest Management Program) 22 April 1996, and AR 420-76 (Pest Management) are the relevant pest management policy regulations.

Describe programs to control noxious or undesirable plants, animals, or forest diseases. Discuss the role of herbicides and their effects on ecosystem health in general. Specifically

discuss compliance with the 26 April 1994 Presidential Memorandum which requires pollution prevention by reducing fertilizer and herbicide use, recycling green waste, and minimizing runoff. Include pesticide reporting requirements as well as applicator training/certification requirements. Cross reference to other sections of the INRMP where the overall Integrated Pest Management Plan may be discussed.

### **8.16 Fire Management**

Describe programs to reduce the incidence of, or to suppress, wildfires. Include the different degrees of protection for specific areas, identify responsibilities (reporting, suppression, firebreak maintenance, etc.), and discuss the effects of wildfires on natural resources.

Describe the installations prescribed fire management program. Discuss the use of this program to reduce fuel loading and potential wildfires. Also discuss the use of prescribed fire for habitat improvement, grazing management, and open space creation for military training scenarios. Identify the areas to be burned, the objectives of the burn, the rotation schedule, and the season of burns. There must be a detailed management plan for each prescribed burn. These plans should be a part of the INRMP or adequately referenced.

### **8.17 Special Interest Area Protection**

Describe provisions to protect special areas such as critical habitat, wetlands, highly erodible lands, important wildlife habitat, rare or unusual plant communities, prime farmland, stream corridors, and buffers around sensitive physical features and habitat types. Be specific as to restrictions, treatments, and timing of treatments. Ensure that requirements to protect endangered species are here, and that other features within the INRMP do not contradict these compliance requirements.

### **8.18 Training Requirements Integration (TRI)**

At ITAM participating installations, describe the TRI program and its role in minimizing damage to natural resources from military mission activities. Include trainer agreed upon regulations and restrictions, training area rotations, and provisions for environmental considerations during mission siting.

## **9.0 INVENTORIYING AND MONITORING**

### **9.1 Objectives**

Indicate objectives of this chapter specific to the installation.

### **9.2 General**

Inventorying is done for the purpose of ascertaining the relative abundance and distribution of various natural resources for the purpose of structuring a management program that will affect these resources.

Monitoring of natural resources is done at established intervals to detect trends or responses to management activities.

Unless the inventorying or monitoring methodology is experimentally controlled, the results will only provide general information and cannot necessarily be used to determine causality.

Explain the purposes/goals of inventory and monitoring in terms of their use for adaptive management. Within each of these sections, explain what inventory or monitoring data are available, and what more may be needed for Plan implementation.

### **9.3 Flora Inventory and Monitoring**

Describe the collection of baseline data and the means used to monitor significant changes in flora. Databases involved might include forest inventory, LCTA, vegetation mapping, satellite imagery and aerial photographs, endangered plant surveys, habitat surveys, range quality determination, and other indicators of ecosystem integrity. Specifically include measures to monitor changes in the capability of the land to support the military mission.

### **9.4 Fauna Inventory and Monitoring**

Describe the collection of baseline data and the means used to monitor significant changes in fauna on the installation. Databases involved might include game and non-game surveys, endangered species surveys and monitoring, livestock monitoring, LCTA animal surveys, and other indicators of ecosystem integrity.

### **9.5 Water Quality Monitoring**

Describe systems used to monitor water quality as it relates to land use and management.

### **9.6 Soil Resources Inventory and Monitoring**

Describe whether existing soil inventories are current, complete, and provide utility in making management decisions. Identify if existing inventories need to be upgraded or if other new inventories are needed. Current published soil surveys and soil erosion surveys are essential for implementation of an INRMP. Soil erosion should be monitored on a regular basis, and especially following damaging events such as high winds, heavy rains, or excess trafficking.

### **9.7 Data Storage, Retrieval, and Analysis**

Describe the means to store, analyze, and use the data collected. This might include GIS or standard database management computer software and hardware.

### **9.8 Five Year Plans**

Summarize and schedule the inventory and monitoring projects to be accomplished in the next five years.

## **10.0 RESEARCH AND SPECIAL PROJECTS**

### **10.1 Objectives**

Identify chapter objectives specific to the installation.

### **10.2 Research Mechanisms**

Describe means used to accomplish any projects that are planned or needed to help the installation implement the INRMP. These might include research done in-house, through

universities, by Corps of Engineers laboratories, by non-governmental organizations such as The Nature Conservancy, or by Intergovernmental Personnel Act (IPA) employees.

### **10.3 Planned Research/Special Projects**

Describe research/special projects needed and planned during the next five to ten years. Prioritize them and indicate the planned mechanism for accomplishment.

## **11.0 ENFORCEMENT**

### **11.1 Objectives**

Identify chapter objectives specific to the installation.

### **11.2 History and Authority**

Describe the organizational history of the natural resources law enforcement program. Include sources of authority. Describe current organization and manpower. Describe efforts to attain or maintain professional natural resources law enforcement status.

### **11.3 Jurisdiction**

Describe the jurisdiction (exclusive, concurrent, and/or proprietary) of each part of the installation with regard to enforcement of natural resources laws.

### **11.4 Enforcement Activities**

Describe the emphasis and activities of the enforcement program and its relationship to the installation natural resources program.

### **11.5 Training**

Identify training to ensure enforcement officers maintain levels of competency normally required by professional natural resources enforcement agencies.

## **12.0 ENVIRONMENTAL AWARENESS**

### **12.1 Objectives**

Identify chapter objectives specific to the installation.

### **12.2 Military Personnel Awareness**

Describe the Environmental Awareness program in terms of educational materials that are used to instill a conservation ethic in military personnel. Materials used on various Army installations include posters, videotapes, stickers, maps, field handbooks, reference or soldiers' field cards, and similar items. Identify those involved and the process for awareness transfer.

### **12.3 Public Awareness**

Use individual subchapters to describe conservation education, environmental awareness, public relations, and other programs designed to inform the public or military users of the value of natural resources conservation and ways they can help with the program. Include such methods

as personal communications, public forums, newspapers, television, radio, prepared talks, special events, conservation education centers, nature trails, and professional talks.

## **13.0 OUTDOOR RECREATION**

### **13.1 Objectives**

Identify chapter objectives specific to the installation.

### **13.2 Military Mission Considerations**

Describe the relationship between opportunities for outdoor recreation and military mission activities. Describe use of impact areas for recreation.

### **13.3 Public Access**

Describe installation policies regarding public access, including access for the handicapped, for natural resources based recreation. Also address access required by the American Indian Religious Freedom Act of 1978.

### **13.4 Hunting, Fishing, and Trapping Programs**

Describe hunting, fishing, and trapping programs and the associated fee assessment and collection methods. Include description of systems used to allow access to range areas, current and potential use of the programs, and specific projects used to improve these programs. Discuss the relationship between these programs and the wildlife population management programs discussed in Chapter 8.

### **13.5 Other Natural Resources Oriented Outdoor Recreation**

Describe outdoor recreation programs that specifically relate to natural resources, exclusive of hunting, fishing, or trapping. These programs might include float trips, gold panning, nature study, hiking, skiing, or camping. Note relationships between these programs and natural resources management to ensure sustainability and protection of ecosystems.

### **13.6 Recreation and Ecosystem Management**

Discuss the relationships between recreation activities and the maintenance of functional ecosystems.

### **13.7 Safety and Security**

Discuss both safety and security issues that could affect accessibility of the installation for natural resources-related outdoor recreation.

## **14.0 CULTURAL RESOURCES PROTECTION**

### **14.1 Objectives**

Identify chapter objectives specific to the installation.

## **14.2 Cultural and Historic Resources**

Briefly describe the cultural and historic resources on the installation in sufficient detail so that major concerns and potential conflicts between military mission, natural resources management, and cultural/historic resources are addressed.

## **14.3 Natural Resources Management Implications**

Describe the relationship between natural resources management and the development and/or implementation of the Integrated Cultural Resources Management Plan and similar documents. Include the role of natural resources enforcement personnel. Include specific steps to ensure that implementation of the INRMP is consistent with cultural resources management.

Ensure that installation procedures to accomplish consultation requirements under Section 106 of the National Historic Preservation Act are accomplished with any pertinent action (specifically identified) within the INRMP. Do the same for compliance with the Archeological Resources Protection Act, the Native American Graves Protection and Repatriation Act, the American Indian Religious Freedom Act, and EO 13007 (Indian Sacred Sites).

Data recovered from archeological and historic sites investigations may be useful for determining the effects of native activities on natural resources or as a basis for determining trends in biodiversity. If sacred sites are identified on the installation, it is critical that any proposed modifications of terrain or plant species composition be considered in light of consultation with affected tribes.

# **15.0 NATIONAL ENVIRONMENTAL POLICY ACT**

## **15.1 Objectives**

Identify chapter objectives specific to the installation. NEPA documentation will be done in accordance with guidance in AR 200-2.

## **15.2 NEPA Responsibilities and Implementation**

Identify the office responsible for implementation of NEPA at the installation. Briefly discuss NEPA specific to the installation, including process details, references to procedures and regulations, and the role of the proponent in NEPA preparation.

## **15.3 NEPA and Natural Resources Management**

Describe the use of NEPA in the evaluation of environmental impacts and alternative actions for the management of natural resources. Describe the NEPA documentation that accompanies the INRMP. Briefly note the steps taken to achieve this documentation, such as scoping and coordination. Include the role of natural resources personnel, especially with regard to individual site development plans that affect natural resources. Include plans for mitigation and enforcement of mitigation. Note that specific natural resource projects done in the future may require additional NEPA review if they do not fall within the scope of significance criteria established in the NEPA document for the INRMP.

## **16.0 BIOPOLITICAL ISSUE RESOLUTION**

Use subchapters to describe each significant biopolitical issue (both internal and external) that directly impacts the implementation of the INRMP. Include issues that are significant even if they are not based on fact. Be as specific as possible with regard to which programs are affected and the extent affected. Include strategies to resolve these issues. Such discussions of strategy do not have to include discussions of tactics which would reduce their effectiveness if made public.

## **17.0 IMPLEMENTATION**

### **17.1 Organization, Roles, and Responsibilities**

Describe the organization necessary to implement the INRMP. Include any relationships among organizations (internal and external) that must be built. Identify the roles and responsibilities of individuals, directorates, etc. within the organization to fully implement the INRMP.

### **17.2 Manpower**

Identify the manpower required to implement the INRMP. Describe the sources of that manpower (internal and external). Include personnel training required.

### **17.3 Project/Programs Priorities**

List each project/program identified within the INRMP which is proposed for accomplishment during the next five years. Prioritize these projects by categories such as High Priority, Important, and Less Important. Include projects/programs required for compliance as High Priority. Other projects/programs that are very meaningful to the installation might also be in the High Priority category. This category might include programs designed to directly benefit the military mission and those which significantly improve the installation quality of life. Generally, lesser important projects are those which would be the first cut or included on an "if funding available" basis. Timelines for implementation of each project or program should be specified.

This information could effectively be presented in a table. Each project or program could be referenced back to the appropriate sub-chapter where it was discussed.

### **17.4 Implementation Funding Options**

Describe sources of funding for INRMP implementation. Explain how high priority items will be put into funding channels. Specifically include INRMP implementation funding requirements in the EPR Report. Estimate the total cost of implementing the INRMP by project, by environmental category, and by year.

### **17.5 Command Support**

Describe the role of command support to the implementation of the INRMP. Specifically identify actions needed to implement the Plan.

## **REFERENCES**

List documents cited in the INRMP using conventional scientific methodology.

## **PERSONS CONTACTED**

List persons who provided information used in the preparation of the INRMP. Such listing does not imply endorsement of the INRMP.

## **APPENDICES**

Liberal use should be made of figures and tables throughout the text if they provide useful guidance for INRMP implementation. If they are not appropriate to be included within the text, they should be included as appendices.

**Appendix A: Figures**

**Appendix B: Lists**

## PART III - INRMP PREPARATION CHECKLIST

This checklist is intended as a reminder of resource materials that could be used as references during the development of the INRMP or of elements that could be incorporated into the INRMP. This list is not inclusive, nor may every element listed here be applicable for every installation.

### 1.0 GENERAL

- Installation's organizational structure
- Satellite installations
- Responsibilities of each branch within the environmental directorate
- Number and type of staff within the environmental directorate
- Environmental directorate staff training needs
- Current partners (e.g., universities, other federal/state agencies) working with the installation
- Neighbors surrounding the installation
- Surveys or assessments currently being conducted
- Surveys or assessments needed
- Geographic Information System (GIS) capabilities
- Software and data management
- Microcomputer systems
- History of natural resources management at the installation
  - Forest management
  - Fish and wildlife management
  - Land management
- Structure of Integrated Training Area Management (ITAM) program
- Installation's ITAM workplan
- Copies of related Environmental Assessments/Environmental Impact Statements
- Copies of relevant maps (e.g., soil surveys, wetlands, training areas, watersheds)

### 2.0 MILITARY MISSION

- Overview of military mission
- Number, type, and location of training, testing, storage, and impact areas
- Number, type, and location of firing ranges
- Type of military activities within each area
- Copies of maps depicting training, testing, storage, and impact areas
- Copies of maps depicting firing ranges
- Copies of current and future training schedules (if available)
- Number of units and troops that train on the installation
- Number and type of vehicles and equipment
- Type of munitions or ordnance used
- Projected changes in the military mission
- Copy of Range Development Plan (RDP)
- Copies of guidance for petroleum, oil, lubricants (POL) and antifreeze disposal

### **3.0 LAND MANAGEMENT**

- Published soil survey
- Soil erodibility
- Locations most susceptible to soil erosion
- Copies of erosion control plan
- Possible Land Rehabilitation and Maintenance (LRAM) projects (e.g., training area rehabilitation, road drainage correction, establishing dedicated river crossings, hardened sites)
- Training Requirements Integration (TRI)
  - Training area rotation
  - Mission siting
  - Training restrictions
- Number and location of agricultural/grazing leases
- Provisions of lease agreements
- Copies of agricultural/grazing leases
- Water quality monitoring (surface water and groundwater)
- Stormwater management requirements
- Copies of Stormwater Management Plans
- Special Area Protection
  - Special status plant species
  - Waters of the United States (including wetlands)
  - Riparian communities
  - Other communities
- Land use restrictions (e.g., streamside forested buffers)
- Copies of Installation Master Plan/Property Utilization Plan

### **4.0 VEGETATION MANAGEMENT**

- Land Condition Trend Analysis (LCTA)
- Range condition surveys
- Floral surveys
- Wetlands surveys
- Use/need for aerial photographs/satellite imagery
- Photo points
- Vegetative mapping efforts
- Fire Management
  - Firebreaks (location and maintenance)
  - Prescribed fire (location of burn sites, burn schedules)
  - Wildfire suppression
  - Wildfire impacts on natural resources

## **5.0 FISH AND WILDLIFE MANAGEMENT**

- Faunal inventory and monitoring
  - Game species
  - Nongame species
  - Threatened and endangered species
  - Fish species
  - Neotropical birds
  - Livestock (if applicable)

## **6.0 RARE, THREATENED, AND ENDANGERED SPECIES**

- Copy of Endangered Species Management Plan
- Endangered species act consultation
- Effects of installation activities on endangered species
- Endangered species activities
  - Preactivity surveys
  - Abundance and distribution studies
  - Predator and prey population studies
  - Incidental take record keeping
- Inventorying and monitoring
- Copies of biological assessments
- Copies of biological opinions
  - Permitted number of "takes"
  - Conditions for "harassment" (e.g., harassment from training is inadvertent)
  - Necessary reasonable and prudent measures

## **7.0 PEST MANAGEMENT**

- Responsibility of noxious animal control
- Noxious Plant Control
  - Noxious plants present on the installation
  - Noxious plant control methods
  - Responsibility for noxious plant control
- Animal Control
  - Domestic pets
  - Insects and rodents
  - Predators and related pests
  - Feral animals
  - Stray cattle

## **8.0 ENVIRONMENTAL AWARENESS**

- Copies of installation environmental regulations
- Copies of installation training regulations
- Handbooks
- Posters

- Field Cards
- Earth Day activities
- Installation newspaper
- Other

## 9.0 OUTDOOR RECREATION

- Hunting
  - Game harvest strategies
  - Population trends of game species
  - Maintenance of harvest data
  - Hunting seasons (bow, rifle, shotgun, blackpowder)
  - Bag limits
  - Check in/check out procedures
  - Hunter safety requirements
  - Number and location of hunting areas (map of hunting areas)
  - Restrictions in various hunting areas
  - Hunting permit fees
  - Other fees (e.g., access fee)
  - Enforcement
- Fishing
  - Type of fish species present on the installation
  - Type of fish species stocked/provided by the state, USFWS, or commercial hatcheries
  - Location/map of fishing areas
  - Water release schedules (if applicable)
  - Fishing permit fees
  - Other fees (e.g., access fee)
  - Check in/check out procedures
- Other Natural Resources Related Activities
  - Hiking
  - Camping
  - Biking
  - Boating
  - Other

## 10.0 CULTURAL RESOURCES MANAGEMENT

- Cultural resources surveys completed
- Future cultural resources surveys scheduled
- Historic building surveys completed
- Future historic building surveys scheduled
- Number of historic/cultural sites on the National Register of Historic Places
- Number of sites eligible for the National Register of Historic Places
- Copies of historic preservation plans (HPPs)
- Copies of cultural resources management plans (CRMPs)

## PART IV - LAWS WHICH EVOKE CONSERVATION ACTIONS

	Influence	
	High	Medium
Abandoned Shipwreck Act of 1987 [43 USC 2101]		X
American Indian Religious Freedom Act of 1978, as amended [42 USC 1996] [PL 95-341]		X
Anadromous Fish Conservation Act (1965) [16 USC 757]		X
Antiquities Act of 1906 [16 USC 431] [PL 59-209]		X
Archaeological and Historic Resources Management [DoDD 4710-1]	X	
Archaeological and Historic Data Preservation Act of 1974 [16 USC 469]		X
Archaeological Resources Protection Act of 1979 [16 USC 470] [PL 96-095]	X	
Bald Eagle Protection Act of 1940 [16 USC 668]		X
Clean Air Act (CAA) (1955) [42 USC 7401]		X
Clean Water Act (CWA) (1972) [33 USC 1251] [PL 92-500]	X	
Coastal Zone Management Act of 1972 [16 USC 1451] [PL 92-583]		X
Conservation and Rehabilitation Program on Military and Public Lands (PL 93-452)		X
Conservation Programs on Military Reservations (Sikes Act) [16 USC 670] [PL 86-797]	X	
Curation of Federally Owned and Administered Archaeological Collections [36 CFR § 79]	X	
Determination of Eligibility for Inclusion in the National Register of Historic Places [36 CFR § 63]	X	
Emergency Wetlands Resources Act of 1986 [16 USC 3901]		X
Endangered Species Act (ESA) [PL 93-205]	X	
Environmental Protection and Enhancement: Subpart H Historic Preservation [32 CFR § 650]		X
Erosion Protection Act [33 USC 426]		X
Estuary Protection Act of 1968 [16 USC 1221]		X
Farmland Protection Policy Act of 1981 [7 USC 4201] [PL 97-098]		X
Federal Cave Resources Protection Act of 1988		X
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended [7 USC 136]	X	
Federal Land Policy and Management Act of 1976 [43 USC 1701]		X
Federal Noxious Weed Act of 1974, as amended [7 USC 2801]	X	
Fish and Wildlife Conservation Act of 1980 [16 USC 2901] [PL 96-366]		X
Fish and Wildlife Coordination Act of 1934 [16 USC 661]		X
Food, Agricultural, Conservation and Trade Act of 1990 (Pesticide Reporting) [7 USC 1361]		X
Historic Preservation Certificates [36 CFR § 67]		X
Historic Sites Act of 1935 [16 USC 461] [PL 74-292]		X
Historic Preservation [AR 420-40]	X	
Hunting, Fishing and Trapping on Military Lands		X
Indian Sacred Sites [EO 13007]	X	
Lacey Act of 1900		X
Marine Mammal Protection Act of 1972 [16 USC 1361] [PL 92-522]		X
Migratory Bird Treaty Act (1918) [16 USC 703] [PL 65-186]	X	
Multiple-Use Sustained Yield Act of 1960 [16 USC 528]		X
National Environmental Policy Act of 1969 (NEPA) [42 USC 4321] [PL 91-190]	X	
National Historic Landmarks Program [36 CFR § 65]		X
National Historic Preservation Act of 1966, as amended [16 USC 470] [PL 89-665]	X	
National Register of Historic Places [36 CFR § 60]	X	
Native American Graves Protection and Repatriation Act of 1990 [25 USC 3001] [PL 101-601]	X	
Native American Graves Protection and Repatriation Act Regulations	X	
North American Wetlands Conservation Act [16 USC 4401]	X	
Outdoor Recreation on Federal Lands		X
Outleasing for Grazing and Agriculture on Military Lands [10 USC 2667]	X	
Preservation of American Antiquities [43 CFR § 3]		X
Protection and Enhancement of the Cultural Environment [EO 11593]	X	
Protection and Enhancement of Environmental Quality [EO 11514]		X
Protection of Archaeological Resources: Uniform Regulations [32 CFR § 229]	X	
Protection of Historic and Cultural Properties [36 CFR § 800]	X	
Protection of Wetlands [EO 11990]	X	
Recreational Fisheries [EO 12962]	X	

Religious Freedom Restoration Act		X
Rivers and Harbors Act of 1899 [33 USC 401]		X
Safe Drinking Water Act of 1974, as amended [42 USC 300] [PL 93-523]		X
Salmon and Steelhead Conservation and Enhancement Act of 1980		X
The Secretary of Interior's Standards for Historic Preservation Projects [36 CFR § 68]	X	
Soil and Water Resources Conservation Act of 1977 [16 USC 2001]		X
Taylor Grazing Act (1934) [43 USC 315] [PL 73-482]		X
Timber Sales on Military Lands [10 USC 2665]	X	
Waiver of Federal Agency Responsibility under Section 110 of the National Historic Preservation Act [36 CFR § 78]		X
Water Resources Planning Act [42 USC 1962]		X
Watershed Protection and Flood Prevention Act [16 USC 1001] [33 USC 701]		X
Wild and Scenic Rivers Act of 1968 [16 USC 1271] [PL 90-542]		X
Environmental Effects Abroad of Major Federal Actions		X
Exotic Organisms [EO 11987]	X	
Floodplain Management [EO 11988]		X
Intergovernmental Coordination Act (1968) [42 USC 4231] [PL 90-577]		X
Protection of Wetlands [EO 11990]	X	
Use of Off-Road Vehicles on Public Lands		X